

WHAT IS CLAIMED IS:

1. A method for generating a reservoir model, comprising:
providing a first framework having a plurality of cells, wherein the first framework is a reservoir framework; and
providing a second framework having a plurality of cells, wherein the volume of the first framework is greater than the volume of the second framework.
2. The method of claim 1, wherein the volume of the second framework is substantially the same size as one of the cells of the first framework.
3. The method of claim 1, wherein each one of the cells of the second framework is substantially the same size as a sample of well data.
4. The method of claim 1, wherein each one of the cells of the second framework is substantially the same size as a sample of core data.
5. The method of claim 1, wherein each one of the cells of the second framework is substantially the same size as a sample of log data.
6. The method of claim 1, further comprising identifying some or all of the cells of the second framework as net or non-net.
7. The method of claim 1, further comprising identifying some or all of the cells of the second framework as sand or shale.
8. The method of claim 1, further comprising populating some or all of the cells of the second framework with net and non-net values.
9. The method of claim 1, further comprising receiving one or more estimated rock-type fraction values of the first framework.
10. The method of claim 1, further comprising receiving one or more estimated rock-type fraction values of the first framework; and identifying some or all of the cells of the second framework as net or non-net according to the estimated rock-type fraction values of the first framework.

11. The method of claim 1, further comprising receiving one or more estimated rock-type fraction values of the first framework; and populating some or all of the cells of the second framework with net and non-net values according to the estimated rock-type fraction values of the first framework.

12. The method of claim 1, further comprising populating some or all of the cells of the second framework with one or more reservoir property values.

13. The method of claim 1, further comprising populating some or all of the cells of the second framework with one or more porosity values.

14. The method of claim 1, further comprising populating some or all of the cells of the second framework with one or more permeability values.

15. The method of claim 1, further comprising populating some or all of the cells of the second framework with one or more water saturation values.

16. The method of claim 1, further comprising populating some or all of the cells of the second framework with one or more reservoir property values to generate a reservoir cell model; and performing a flow simulation on the reservoir cell model to generate one or more effective reservoir property values for the first framework.

17. The method of claim 1, further comprising:
populating some or all of the cells of the second framework with one or more reservoir property values to generate a reservoir cell model;
performing a flow simulation on the reservoir cell model to generate one or more effective reservoir property values for the first framework; and
calculating the variability between the effective reservoir property values for the first framework.

18. The method of claim 1, further comprising:
populating some or all of the cells of the second framework with one or more reservoir property values to generate a reservoir cell model;

performing a flow simulation on the reservoir cell model to generate one or more effective reservoir property values for the first framework;

calculating the variability between the effective reservoir property values for the first framework; and

determining whether the rate of change in the variability between the effective reservoir property values remains substantially the same.

19. The method of claim 1, further comprising:

populating some or all of the cells of the second framework with one or more reservoir property values to generate a reservoir cell model;

performing a flow simulation on the reservoir cell model to generate one or more effective reservoir property values for the first framework; and

populating the first framework with the effective reservoir property values to generate the reservoir model.

20. The method of claim 1, wherein the reservoir model is a flow simulation model.

21. The method of claim 1, wherein the reservoir model is a geologic model.

22. The method of claim 1, wherein the volume of the second framework is greater than the size of one cell of the first framework.

23. The method of claim 1, wherein the second framework comprises two or more cell samples of the first framework, wherein each cell sample is substantially the same size as one of the cells of the first framework.

24. The method of claim 1, further comprising:

populating some or all of the cells of the second framework with one or more reservoir property values to generate a reservoir cell model; and

extracting one or more cell samples from the reservoir cell model, wherein each cell sample is substantially the same size as one of the cells of the first framework.

25. The method of claim 1, further comprising:

populating some or all of the cells of the second framework with one or more reservoir property values to generate a reservoir cell model; and

extracting one or more cell samples from the reservoir cell model, wherein each cell sample is substantially the same size as one cell of the first framework; and

performing a flow simulation on the cell sample to generate one or more effective reservoir property values.

26. The method of claim 1, wherein the second framework is three dimensional.

27. A method for generating a reservoir model, comprising:

providing a first framework having a plurality of cells, wherein the first framework is a reservoir framework; and

providing a second framework having a plurality of cells, wherein the volume of the second framework is substantially the same size as one of the cells of the first framework.

28. The method of claim 27, wherein each one of the cells of the second framework is substantially the same size as a sample of well data.

29. The method of claim 27, wherein each one of the cells of the second framework is substantially the same size as a sample of core data.

30. The method of claim 27, wherein each one of the cells of the second framework is substantially the same size as a sample of log data.

31. The method of claim 27, further comprising identifying some or all of the cells of the second framework as net or non-net.

32. The method of claim 27, further comprising identifying some or all of the cells of the second framework as sand or shale.

33. The method of claim 27, further comprising populating some or all of the cells of the second framework with net and non-net values.

34. The method of claim 27, further comprising receiving one or more estimated rock-type fraction values of the first framework.

35. The method of claim 27, further comprising receiving one or more estimated rock-type fraction values of the first framework; and identifying some or all of the cells of the second framework as net or non-net according to the estimated rock-type fraction values of the first framework.
36. The method of claim 27, further comprising receiving one or more estimated rock-type fraction values of the first framework; and populating some or all of the cells of the second framework with net and non-net values according to the estimated rock-type fraction values of the first framework.
37. The method of claim 27, further comprising populating some or all of the cells of the second framework with one or more reservoir property values.
38. The method of claim 27, further comprising populating some or all of the cells of the second framework with one or more porosity values.
39. The method of claim 27, further comprising populating some or all of the cells of the second framework with one or more permeability values.
40. The method of claim 27, further comprising populating some or all of the cells of the second framework with one or more water saturation values.
41. The method of claim 27, further comprising populating some or all of the cells of the second framework with one or more reservoir property values to generate a reservoir cell model; and performing a flow simulation on the reservoir cell model to generate one or more effective reservoir property values for the first framework.
42. The method of claim 27, further comprising:
populating some or all of the cells of the second framework with one or more reservoir property values to generate a reservoir cell model;
performing a flow simulation on the reservoir cell model to generate one or more effective reservoir property values for the first framework; and
calculating the variability between the effective reservoir property values for the first framework.

43. The method of claim 27, further comprising:
populating some or all of the cells of the second framework with one or more reservoir property values to generate a reservoir cell model;
performing a flow simulation on the reservoir cell model to generate one or more effective reservoir property values for the first framework;
calculating the variability between the effective reservoir property values for the first framework; and
determining whether the rate of change in the variability between the effective reservoir property values remains substantially the same.
44. The method of claim 27, further comprising:
populating some or all of the cells of the second framework with one or more reservoir property values to generate a reservoir cell model;
performing a flow simulation on the reservoir cell model to generate one or more effective reservoir property values for the first framework; and
populating the first framework with the effective reservoir property values to generate the reservoir model.
45. The method of claim 27, wherein the reservoir model is a flow simulation model.
46. The method of claim 27, wherein the reservoir model is a geologic model.
47. A method for generating a reservoir model, comprising:
providing a first framework having a plurality of cells, wherein the first framework is a reservoir framework; and
providing a second framework having a plurality of cells, wherein each one of the cells of the second framework is substantially the same size as a sample of well data.
48. A method for generating a reservoir model, comprising:
providing a framework having a plurality of cells, wherein each cell is the substantially same size as a sample of well data;

identifying some or all of the cells of the framework as net or non-net;
populating some or all of the cells of the framework with one or more
reservoir properties to provide a reservoir cell model; and
performing a flow simulation on the reservoir cell model to generate one or
more effective reservoir property values.

49. The method of claim 48, wherein the framework is substantially the same size
as one cell of a reservoir framework.

50. The method of claim 48, wherein the framework is greater than the size of one
cell of a reservoir framework.

51. The method of claim 48, wherein identifying some or all of the cells comprises
populating some or all of the cells of the framework with net and non-net values that
correspond to one or more estimated rock-type fraction values of a reservoir
framework for the reservoir model.

52. The method of claim 48, wherein the sample of well data is the same size as a
sample of core data.

53. The method of claim 48, wherein the sample of well data is the same size as a
sample of log data.

54. The method of claim 9, wherein the rock-type fraction values are net-to-gross
values.

55. The method of claim 10, wherein the rock-type fraction values are net-to-gross
values.

56. The method of claim 11, wherein the rock-type fraction values are net-to-gross
values.